

Attorney Docket No.: **DEX-0548**
Inventors: **Macina et al.**
Serial No.: **10/538,001**
Filing Date: **March 17, 2006**
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This listing of the claims will replace all prior versions and listings of claims in the application:

Listing of the claims:

Claim 1 (currently amended): An isolated nucleic acid molecule comprising:

- (a) a nucleic acid molecule comprising a nucleic acid sequence that encodes an amino acid sequence of ~~SEQ ID NO: 73-179~~ SEQ ID NO:174;
- (b) a nucleic acid molecule comprising a nucleic acid sequence of ~~SEQ ID NO: 1-72~~ SEQ ID NO:70; or
- (c) ~~a nucleic acid molecule that selectively hybridizes to the nucleic acid molecule of (a) or (b); or~~
~~(d)~~ a nucleic acid molecule having at least 95% 98% sequence identity to the nucleic acid molecule of (a) or (b).

Claim 2 (original): The nucleic acid molecule according to claim 1, wherein the nucleic acid molecule is a cDNA.

Claim 3 (original): The nucleic acid molecule according to claim 1, wherein the nucleic acid molecule is genomic DNA.

Claim 4 (original): The nucleic acid molecule according to claim 1, wherein the nucleic acid molecule is an RNA.

Claim 5 (original): The nucleic acid molecule according to claim 1, wherein the nucleic acid molecule is a mammalian nucleic acid molecule.

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Claim 6 (original): The nucleic acid molecule according to claim 5, wherein the nucleic acid molecule is a human nucleic acid molecule.

Claim 7 (currently amended): A method for determining the presence of a breast specific nucleic acid (BSNA) in a sample, comprising the steps of:

(a) contacting the sample with the nucleic acid molecule of claim 1 under stringent conditions in which the nucleic acid molecule will selectively hybridize to a breast specific nucleic acid; and

(b) detecting hybridization of the nucleic acid molecule to a BSNA in the sample, wherein the detection of the hybridization indicates the presence of a BSNA in the sample.

Claim 8 (original): A vector comprising the nucleic acid molecule of claim 1.

Claim 9 (original): A host cell comprising the vector according to claim 8.

Claim 10 (original): A method for producing a polypeptide encoded by the nucleic acid molecule according to claim 1, comprising the steps of:

(a) providing a host cell comprising the nucleic acid molecule operably linked to one or more expression control sequences, and

(b) incubating the host cell under conditions in which the polypeptide is produced.

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Claim 11-14 (canceled)

Claim 15 (currently amended): A method for diagnosing or monitoring the presence and metastases of breast cancer in a patient, comprising the steps of:

(a) determining an amount of:

- ~~(i) a nucleic acid molecule comprising a nucleic acid sequence that encodes an amino acid sequence of SEQ ID NO: 73-179 SEQ ID NO:;~~
- ~~(ii) a nucleic acid molecule comprising a nucleic acid sequence of SEQ ID NO: 1-72;~~
- ~~(iii) a nucleic acid molecule that selectively hybridizes to the nucleic acid molecule of (i) or (ii);~~
- ~~(iv) a nucleic acid molecule having at least 95% sequence identity to the nucleic acid molecule of (i) or (ii);~~
- ~~(v) a polypeptide comprising an amino acid sequence with at least 95% sequence identity to of SEQ ID NO: 73-179; or~~
- ~~(vi) a polypeptide comprising an amino acid sequence encoded by a nucleic acid molecule having at least 95% sequence identity to a nucleic acid molecule comprising a nucleic acid sequence of SEQ ID NO: 1-72
a nucleic acid molecule of claim 1 and;~~

(b) comparing the amount of the determined nucleic acid molecule ~~or the polypeptide~~ in the sample of the patient to the amount of the breast specific marker in a normal control; wherein a difference in the amount of the nucleic acid molecule ~~or the polypeptide~~ in the sample compared to the amount of the nucleic

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acid molecule or the polypeptide in the normal control is associated with the presence of breast cancer.

Claim 16 (currently amended) A kit for detecting a risk of cancer or presence of cancer in a patient, said kit comprising a means for determining the presence of:

- (a) a nucleic acid molecule comprising a nucleic acid sequence that encodes an amino acid sequence of SEQ ID NO: 73-179;
- (b) a nucleic acid molecule comprising a nucleic acid sequence of SEQ ID NO: 1-72;
- (c) a nucleic acid molecule that selectively hybridizes to the nucleic acid molecule of (a) or (b); or
- (d) a nucleic acid molecule having at least 95% sequence identity to the nucleic acid molecule of (a) or (b); or
- (e) a polypeptide of claim 12
a nucleic acid molecule of claim 1.

Claim 17 (currently amended) A method of treating a patient with breast cancer, comprising the step of administering a composition consisting of:

- (a) a nucleic acid molecule comprising a nucleic acid sequence that encodes an amino acid sequence of SEQ ID NO: 73-179;
- (b) a nucleic acid molecule comprising a nucleic acid sequence of SEQ ID NO: 1-72;
- (c) a nucleic acid molecule that selectively hybridizes to the nucleic acid molecule of (a) or (b);
- (d) a nucleic acid molecule having at least 95% sequence

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~~identity to the nucleic acid molecule of (a) or (b); or~~
~~(e) a polypeptide of claim 12;~~
a nucleic acid molecule of claim 1 to a patient in need thereof,
wherein said administration induces an immune response against
the breast cancer cell expressing the nucleic acid molecule or
polypeptide.

Claim 18 (currently amended): A vaccine comprising the
~~polypeptide or the nucleic acid encoding the polypeptide of claim~~
~~12~~ the nucleic acid molecule of claim 1.